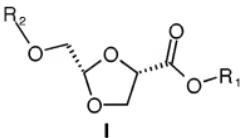


This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Currently Amended): A process for producing a compound of formula I:



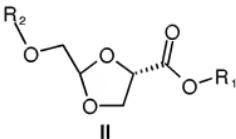
wherein

R₁ is C₁₋₁₂ alkyl, C₂₋₁₂ alkenyl, C₂₋₁₂ alkynyl, C₆₋₁₂ aryl, C₃₋₁₀ heterocycle, C₆₋₁₂ aralkyl or C₃₋₁₀ heteroaralkyl, and

R₂ is a hydroxyl protecting group;

said process comprising the steps of:

- a) subjecting a compound eomponents of formula II:



to an enzymatic diastereomeric resolution in the presence of a suitable amount of enzyme chosen from Pig Liver Esterase enzyme or Porcine Pancreatic Lipase enzyme;

- b) recovering said compound of formula I

wherein:

R₁ is chosen from C₁₋₁₂ alkyl, C₂₋₁₂ alkenyl, C₂₋₁₂ alkynyl, C₆₋₁₂ aryl, C₃₋₁₀ heterocycle, C₆₋₁₂ aralkyl or C₃₋₁₀ heteroaralkyl; and

R₂ is a hydroxyl protecting group.

SHIRE-0518

2. (Original): The process according to claim 1, wherein R₁ is C₁₋₁₂ alkyl.

3. (Currently Amended): The process according to claim 1 wherein R₂ is chosen from: CO-C₁₋₆ alkyl, CO-C₆₋₁₂ aryl, CO-C₁₋₆ alkoxy, CO-C₆₋₁₂ aryloxy, or CO-C₆₋₁₂ arylalkyl.

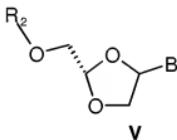
4. (Previously Presented): The process according to claim 1, wherein R₂ is CO-C₆₋₁₂ aryl.

5. (Previously Presented): The process according to claim 1, wherein the enzyme is Pig Liver Esterase.

6. (Previously Presented): The process according to claim 1, wherein the enzyme is Porcine Pancreatic Lipase.

7. (Currently Amended): The process according to claim 1, further comprising the steps of:

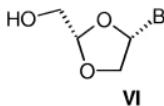
a) replacing the functional group at position C4 of the compound of formula I to produce a compound of formula V:



wherein B is purine or pyrimidine base or an analogue thereof;

b) removing the group R₂ of said compound of formula V;

c) recovering a compound of formula VI;

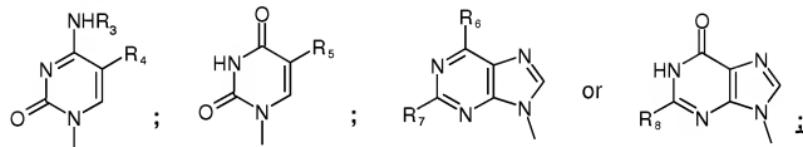


or a pharmaceutically acceptable salt thereof;

wherein;

B is purine or pyrimidine base or an analogue thereof.

8. (Currently Amended): The process according to claim 7, wherein B is chosen from:



wherein;

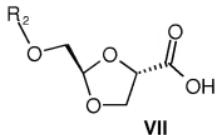
R₃ is chosen from H, C₁₋₆ alkyl, C₁₋₆ acyl, or and CO-R₉; wherein

R₉ is H or C₁₋₆ alkyl;

R₄ and R₅ are each independently chosen from H, C₁₋₆ alkyl, bromide, chloride, fluoride, iodide or CF₃; and

R₆, R₇ and R₈ are each independently chosen from H, bromide, chloride, fluoride, iodide, amino, hydroxyl, or C₃₋₆ cycloalkylamino.

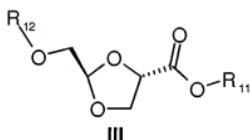
9. (Currently Amended): The process according to claim 1, further comprising the step of recovering a compound of formula VII:



10. (Original): A process according to claim 1, wherein R₁ is C₁₋₁₂ alkyl and R₂ is CO-C₆₋₁₂ aryl.

11. (Original): A process according to claim 1, wherein R₁ is methyl and R₂ is benzoyl.

12. (Currently Amended): A process for producing a compound of formula III:

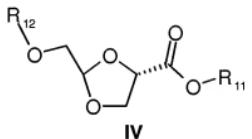


wherein

R₁₁ is C₁₋₁₂ alkyl, C₂₋₁₂ alkenyl, C₂₋₁₂ alkynyl, C₆₋₁₂ aryl, C₃₋₁₀ heterocycle, C₆₋₁₂ aralkyl or C₃₋₁₀ heteroaralkyl; and R₁₂ is a hydroxyl protecting group,

said process comprising the steps of:

a) subjecting a compound of formula IV:



to an enzymatic diastereomeric resolution in the presence of a suitable amount of enzyme, wherein said enzyme is chosen from Candida Antarctica "A" lipase, Candida Antarctica "B" lipase, Candida Lypolitica Lipase, or Rhizomucor Miehei Lipase; and

b) recovering said compound of formula III;

wherein R₁₁ is chosen from C_{sub.1} 12 alkyl, C_{sub.2} 12 alkenyl, C_{sub.2} 12 alkynyl,

SHIRE-0518

C_{sub.6-12} aryl, C_{sub.3-10} heterocycle, C_{sub.6-12} aralkyl or C_{sub.3-10} heteroaralkyl; and R₁₂ is a hydroxyl protecting group.

13. (Original): The process according to claim 12, wherein R₁₁ is C₁₋₁₂ alkyl.

14. (Currently Amended): The process according to claim 12, wherein R₁₂ is chosen from: CO-C₁₋₆ alkyl, CO-C₆₋₁₂ aryl, CO-C₁₋₆ alkoxy, CO-C₆₋₁₂ aryloxy, or CO-C₆₋₁₂ arylalkyl.

15. (Original): The process according to claim 12, wherein R₁₂ is CO-C₆₋₁₂ aryl.

16. (Original): The process according to claim 12, wherein the enzyme is Candida Antarctica "A" lipase.

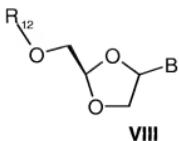
17. (Original): The process according to claim 12, wherein the enzyme is Candida Antarctica "B" lipase.

18. (Original): The process according to claim 12, wherein the enzyme is Candida Ly politica Lipase.

19. (Original): The process according to claim 12, wherein the enzyme is Rhizomucor Miehei Lipase.

20. (Currently Amended): The process according to claim 12, further comprising the steps of:

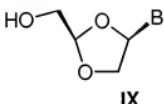
a) replacing the functional group at position C4 of the compound of formula III to produce a compound of formula VIII:



wherein B is purine or pyrimidine base or an analogue thereof;

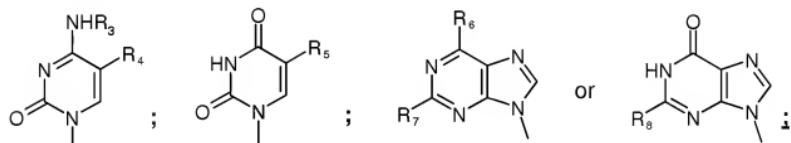
b) removing the group R₁₂ of said compound of formula VIII;

c) recovering a compound of formula IX:



or a pharmaceutically acceptable salt thereof; wherein; B is purine or pyrimidine base or an analogue thereof.

21. (Currently Amended): The process according to claim 20, wherein B is chosen from:



wherein;

R₃ is chosen from H, C₁₋₆ alkyl, C₁₋₆ acyl and CO-R₉; wherein

R₉ is H or C₁₋₆ alkyl;

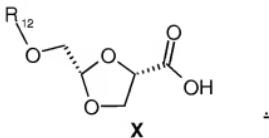
R₄ and R₅ are each independently chosen from H, C₁₋₆ alkyl, bromide, chloride, fluoride, iodide or CF₃; and

R₆, R₇ and R₈ are each independently chosen from H, bromide, chloride, fluoride, iodide, amino,

SHIRE-0518

hydroxyl or C₃₋₆ cycloalkylamino.

22. (Currently Amended): The process according to claim 1226, further comprising the step of converting said compound of formula III to a compound of formula IV and recovering asaid compound of formula X:



23. (Original): A process according to claim 12, wherein R₁₁ is C₁₋₁₂ alkyl and R₁₂ is CO-C₆₋₁₂ aryl.

24. (Original): A process according to claim 12, wherein R₁₁ is methyl and R₁₂ is benzoyl.